

23. The method of claim 21 wherein the amplification is carried out using a polymerase chain reaction method.

24. A method for diagnosing a telomerase-related condition in a patient, comprising:

- a) obtaining a cell or tissue sample from the patient;
- b) determining an amount of an RNA encoding a human telomerase protein hTERT gene product in the cell or tissue by:
 - 1) contacting the sample with a nucleic acid that specifically hybridizes to said RNA, and detecting the hybridization complex; or,
 - 2) amplifying said RNA and detecting the amplification product;wherein the RNA hybridizes under stringent conditions to a polynucleotide having a sequence exactly complementary to SEQ ID NO:100; and,
- c) comparing the amount of hTERT gene product in the cell or tissue determined in step (b) with the amount in a cell or tissue sample of the same type from a healthy subject,

wherein a different amount of said RNA in the sample from the patient and the sample in the healthy subject is diagnostic of a telomerase-related condition.

25. An isolated or purified polynucleotide having a sequence of SEQ ID NO:100, wherein said polynucleotide is from about 10 nucleotides to about 2171 nucleotides in length.

26. A polypeptide encoded by the polynucleotide of claim 25.

REMARKS

Following entry of this Amendment, claims 1-26 will be pending. Support for this Amendment is replete in the specification. For example, the "deletion, insertion, or point mutations" referred to in claim 12 find support in the specification at, e.g., page 26, lines 15-25. Stringent hybridization (e.g., claim 21) is described in the specification at, e.g., page 23, line 24 to page 24, line 10. Amplification of nucleic acid sequences (e.g., claims 21 and 23) is described in the specification at, e.g., page 20, line 24 to page 22, line 5. Descriptions of the detection of

nucleic acids encoding a telomerase protein or diagnosing telomerase-related diseases (e.g., claims 21 and 24) is replete in the specification; see, e.g., page 52, line 25 to page 55, line 4. Use of human tissue samples (e.g., claim 22) is described at, e.g., page 52, line 28 to page 53, line 5. The polynucleotide of claim 25 and polypeptide of claim 26 find support at, e.g., page 97 of the specification.

It is believed that the pending claims are in condition of allowance. Issuance of a Notice of Allowance is respectfully requested. If the Examiner believes a telephone conference would expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (650) 326-2400, Ext. 5270.

Respectfully submitted,



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